

REMARKS/ARGUMENTS

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Reconsideration of the present application, as amended, is respectfully requested.

A. CLAIM AMENDMENTS

As a result of the present amendment, claims 1-5 and 7-8 are presented in the case for continued prosecution. The subject matter of cancelled claim 6 has been added to claim 1. Molecular formula of calcium sulfate has been reworded in the text format in claims 1 and 2. New claims 7-8 have described the text "calcium sulfate" in suitable molecular formulae. Support can be found, for example, in Examples in the specification. No new matter has been added.

B. CLAIM REJECTION UNDER 35 U.S.C. 112, SECOND PARAGRAPH

The Examiner has rejected claim 3 under 35 U.S.C. §112, second paragraph, alleging that the term "biopolymer" in claim 3 is indefinite. Additionally, the Examiner has suggested removing polymers not from a living organism.

For facilitating the prosecution of this application and without prejudice, Applicants have removed "polyacrylic acids, polyvinyl ethers and polystyrene" in claim 3.

Reconsideration and removal of the rejection is therefore proper and respectfully requested.

C. THE CLAIMED INVENTION

The present invention is directed to get-type bone filling compositions including calcium sulfate and viscous biopolymer. The compositions include 20-80 weight % of mixture containing 90-99 weight % of calcium sulfate and 1-10 weight % of one or more of CaCO_3 , MgCO_3 , or $\text{CaCO}_3 \cdot \text{MgCO}_3$ and 80-20 weight % of viscous biopolymer. The composition of the present invention can easily be administered into a bone-loss area but does not diffuse into surrounding area. Thus, the present invention allows a shortened bone-consolidation period by stimulating bone-formation and bone-consolidation. The calcium sulfate can be in either non-hydrated form (CaSO_4) or hydrated form such as hemihydrate ($\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$), dihydrate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), and monohydrate ($\text{CaSO}_4 \cdot \text{H}_2\text{O}$).

D. THE CLAIMS ARE NOT RENDERED OBVIOUS BY CHO IN VIEW OF LIU**1. Summary of the Rejection**

At page 3 of the Office Action, the Examiner has rejected the subject matter of pending claims under 35 U.S.C. 103(a) as allegedly unpatentable over Cho et al. (J. Craniofac. Surg., 2002, May 13(3), 465-75) in view of Liu et al. (US Patent No. 5,281,265). The Examiner has alleged that it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add CaCO_3 , MgCO_3 , $\text{CaCO}_3\cdot\text{MgCO}_3$, as suggested by Liu et al. to the composition of Cho et al.

2. MPEP 2132.01 Requirements

The Examiner is reminded that "Applicant's disclosure of his or her own work within the year before the application filing date cannot be used against him or her... Where the applicant is one of the co-authors of a publication cited against his or her application, he or she may overcome the rejection by filing an affidavit or declaration ... under 37 CFR 1.132 establishing that the article is describing applicant's own work. An affidavit or declaration by applicant alone indicating that applicant is the sole inventor and that the others were merely working under his or her direction is sufficient to remove the publication as a reference..." *In re Katz*, 687 F.2d 450, 215 USPQ 14 (CCPA 1982); *MPEP 2132.01*; *MPEP 715.01(c)*; *In re Facius*, 408 F.2d 1396, 161 USPQ 294 (CCPA 1969).

The Court of *In re Facius* specifically held that his own invention, regardless of the form of disclosure to public, may not be prior art against him for purposes of 35 USC 103 rejection, absent a statutory bar.

3. Cho et al. is Not Prior Art

It is urged that the Examiner has not made a proper *prima facie* case of obviousness. Reconsideration and removal of the rejection is therefore proper and earnestly requested.

Byung Chae Cho and In-San Kim are co-inventors of the present invention. The present application was filed under 35 USC 371 claiming the benefit of priority from PCT/KR02/01839 filed on September 30, 2002. Cho et al. is the primary reference relied upon by the Examiner. Cho et al. was published in May 2002 within one year from the filing date of the priority application. Among the four-identified coauthors of Cho et al., Byung Chae Cho and In-San

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Kim are co-inventors/Applicants of the present invention. Cho et al. describes the subject matter of Applicants' own invention. The other two coauthors, Jae Woo Park and Bong Soo Baik, merely worked under the co-inventors' direction and they are not inventors of the present invention. See the Declaration under 37 CFR 1.132 filed concurrently with this response.

Accordingly, it is urged that Cho et al. is not prior art. Reconsideration and removal of the rejection is thus proper and respectfully requested.

4. Liu et al not disclose the compositions of the present invention.

Liu et al. relates to surgical cements including calcium sulfate. Liu does not teach or suggest the compositions of the present invention containing both calcium sulfate and viscous biopolymer. Furthermore, Cho et al is not prior art for the reasons stated above. Thus, the Examiner has not established a *prima facie* case of obviousness by showing that the motivation to combine the two references and a reasonable expectation of success are found in the prior art references.

As such, it is urged that the present invention is not obvious, and reconsideration and removal of the rejection is respectfully requested.

D. FEES

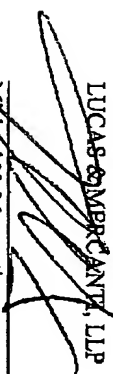
This response is being filed within the shortened period for response. No further fee is believed to be due. If it is determined that any further fees are due or any overpayment has been made, the Assistant Commissioner is hereby authorized to debit or credit such sum to deposit account 02-2275. Pursuant to 37 C.F.R. 1.136(a)(3), please treat this and any concurrent or future reply in this application that requires a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. The fee associated therewith is to be charged to Deposit Account No. 02-2275.

E. CONCLUSION

In view of the actions taken and remarks presented, it is respectfully submitted that each and every one of the matters raised by the Examiner has been addressed by the present amendment and that the present application is now in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,


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